

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC., a
Delaware corporation,

Plaintiff,

v.

FAIRCHILD SEMICONDUCTOR
INTERNATIONAL, INC., a Delaware
corporation, and FAIRCHILD
SEMICONDUCTOR CORPORATION, a
Delaware corporation,

Defendants.

C.A. No. 04-1371 JJF

PUBLIC VERSION

POWER INTEGRATIONS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

In an ironic twist, Fairchild's Opening Claim Construction Brief [D.I. 156 ("Fairchild Brief")] charges Power Integrations with engaging in outcome-determinative claim construction, but Power Integrations' constructions have remained virtually unchanged from the earliest contention discovery in this case. Fairchild, on the other hand, has flip-flopped on a number of constructions throughout the process, and Fairchild adopted several new, last-minute positions in December as the parties were working on expert reports. Fairchild's shifting sands approach to claim construction makes clear that Fairchild is the party that has approached this process backwards.

Fairchild's ever changing constructions have one of two things in common—either they render the claims of Power Integrations' patents so broad as to read on a wide range of prior art (including art explicitly distinguished and labeled "PRIOR ART" in the patents) or they ignore the meaning of the claim terms as they were understood by those of ordinary skill in the art at the time the patents were filed, in order to read in limitations from outside the patents that do not belong. In doing so, Fairchild would have the Court construe claim terms out of the blue—ignoring the teachings in the patents' specifications and the understanding of those of ordinary skill in the art—based on little more than attorney argument.

Fairchild also suggests Power Integrations' inventions are merely narrow improvements over the prior art, but that is neither true nor relevant.¹ Fairchild's argument ignores the fact that the patent examiner allowed the claims after finding two separate patentable inventions in one of Power Integrations' patent filings—decisions that are presumed to be correct. Moreover, Fairchild's assertion that Power Integrations' patents contain only *narrow* inventions provides no basis upon which to construe the

¹ It is also belied by the fact that Fairchild's engineers copied Power Integrations' patented technology, which Power Integrations will show at trial.

claims so *broadly* as to read on the prior art discussed in the patents themselves. As noted before, Fairchild's efforts to that end show that Fairchild's arguments are contrived, as Fairchild's position requires the Court to assume the patent examiner was incompetent. Fairchild's approach defies common sense, is contrary to the law, and should be rejected.

II. ARGUMENT

Fairchild's proposed constructions in its opening brief rely heavily on attorney argument, with little evidentiary support for construing highly technical language. Fairchild correctly argues that the public is entitled to review the complete record to determine the proper scope of Power Integrations' inventions, but in doing so Fairchild ignores the need to look at the terms' meanings in the relevant timeframe, as they would have been understood by those of ordinary skill in the art. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*) (citations omitted) ("We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.").

A. Fairchild's "DMOS" Argument for the '075 Patent Overreaches and Ignores the Relevant Information.

Fairchild proposes constructions for the '075 patent that depend almost entirely on the alleged "DMOS" issue. But the Court need not even reach the "DMOS" issue in this claim construction proceeding because, if it is relevant at all, it pertains to equivalence and not claim construction. "DMOS" is not a claim term. Fairchild's argument with respect to "DMOS"² is thus misdirection and does not bear on claim construction or any ultimate issue in this case. As such, the issue of any estoppel created

² Fairchild employs a circular process of defining its own devices as "DMOS" by 2006 standards, arguing that Power Integrations disclaimed all "DMOS" during prosecution in the 1980s, and voila—finding non-infringement.

when Power Integrations disclaimed a process using a self-aligned double diffusion process during prosecution (the “DMOS” of Colak) is of no import here³.

Even if the Court addresses the DMOS issue in the context of claim construction, it should recognize that the teaching of the prior art and the basic facts regarding the manufacture of high voltage devices are both different than Fairchild represents them. And while Fairchild repeatedly asserts that it is entitled to the “full disavowal of DMOS,” it also admits that what Power Integrations disclaimed during prosecution was the “DMOS” of Colak—a self-aligned double diffusion process. [Fairchild Brief at 4 (“Power Integrations argued that the claims of the ’075 Patent did not cover *DMOS* devices such as those disclosed in Colak.”) (emphasis added); *id.* (“Power Integrations made clear that its claims excluded *DMOS* devices such as those described in the Colak patent.”) (emphasis added).] Both of these passages in Fairchild’s Brief communicate precisely what Power Integrations has asserted all along—that the prosecution history addressed the specific DMOS of Colak. These admissions make clear that Fairchild is mixing terminology elsewhere, when it switches between discussing the “DMOS” alleged to be in its products and the specific DMOS of Colak.⁴

Fairchild’s argument regarding DMOS at pages 5-6 of its brief—that the nature of the claims of the ’075 patent (apparatus) somehow renders the disclaimer broader than if the claim were drafted as a process claim—is a further bit of misdirection and finds no support in the law. Fairchild has argued for a construction that involves the term

³ On the merits of the estoppel issue, which Power Integrations will address at trial if necessary, the specific art distinguished as DMOS in 1988—the Colak ’879 patent—employed a specific, self-aligned double diffusion process that was referred to as “DMOS” at that time. Hayes Decl. Ex. A (Shields Opening Report) at ¶¶ 18-19. Power Integrations is not accusing any Fairchild device constructed with such a self-aligned diffusion process of infringement (literally or by equivalents), and Fairchild has not (indeed, cannot) assert that its devices are built with such a process. There is no estoppel.

⁴ Fairchild says that PI’s expert Mike Shields and PI “agree that Power Integrations’ statements made during prosecution of the ’075 patent constitute a clear disavowal of DMOS devices,” Fairchild brief at 4 (citing Shields Opening Report at 6). That isn’t quite accurate; the cited portion of the Shields Opening Report explicitly refers to **Fairchild’s argument** and concludes “I disagree with Fairchild’s contention.”

DMOS—not Power Integrations—and DMOS is a term for a process of building high voltage MOS devices (albeit a term that has had different meanings at different times). The specific construction process determines the nature of the resulting device structure, and it is not possible to divorce the two. Therefore, any discussion of the structures relevant to the '075 patent necessarily turns on the process used to create those structures. [See Hayes Decl.⁵ Ex. A (Shields Opening Report) at ¶ 21 (“[I]n attempting to characterize a transistor as a “DMOS” transistor, the fabrication process must be considered.”)].

Moreover, Fairchild’s argument that Power Integrations disclaimed DMOS as that term is used today is simply illogical. Power Integrations may be prevented from arguing a particular range of equivalents in light of the statements made during prosecution, but it is illogical to suggest that Power Integrations disclaimed what did not exist at the time. At the time of prosecution, “DMOS” referred to a self-aligned process, and to a resultant transistor formed by this specific self-aligned double-diffusion process, that used two successive diffusions through the same opening to form the transistor channel and source contact regions. [See *id.* at ¶ 18]. The Colak reference cited during prosecution shows a good example of the end structure that results from the self-aligned process discussed during prosecution, with the source (second) diffusion completely formed within the channel (first) diffusion through that same mask opening. [See *id.* at ¶¶ 19-21]. Since the time of prosecution, though, the use of the term “DMOS” has broadened to refer to something both later-developed and more generic, to include all electrically asymmetrical transistors including those where the *characteristics* of the channel region—rather than its presence—are determined by a separate diffusion step. [*Id.* at ¶ 22]. To say now, ex post facto, that this different use of the term DMOS is outside the literal scope of the

⁵ Citations to the Hayes Declaration (“Hayes Decl.”) refer to exhibits attached to the declaration submitted with this responsive brief. Citations to the Headley Declaration (“Headley Decl.”) refer to exhibits attached to the declaration submitted with Power Integrations’ opening brief. [D.I. 152].

claim, as a matter of claim construction, would read out the preferred embodiment of the invention. [*Id.*] That, of course, “is rarely, if ever, correct.” *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

Fairchild also seeks to rely on another reference cited during prosecution of the '075 patent to argue for a broad exclusion of anything it refers to as “DMOS.” [Fairchild Brief at 5 (citing Sze, *Physics of Semiconductor Devices* at 489)]. In doing so, however, Fairchild fails to quote the important sentence from that same page regarding the “DMOS” described in Sze—the sentence that explains that, contrary to Fairchild’s suggestion, Sze was *not* describing DMOS formed with photolithography, so called non-self-aligned DMOS. DMOS formed using lithography was later-developed technology not known at the time of the prosecution and not described Sze or in Colak. [Hayes Decl. Ex. B (Sze excerpts) at 489-90 (“The DMOS and DIMOS structures can have very short channels and do not depend on a lithographic mask to determine channel length.” (emphasis added)); Ex. C (Dolny Tr.) at 132:25-134:8].

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Because Sze is consistent with and, in fact, defines DMOS to mean exactly the self-aligned structure shown in the “DMOS” of Colak, it actually supports Power Integrations’ construction rather than Fairchild’s.

The Court should not import a DMOS limitation into the terms of the '075 patent and should leave for another day whether the scope of the disclaimer made by Power Integrations has any bearing on this case.

B. The Specific Terms of the '075 Patent.

1. “A pair of laterally spaced pockets of semiconductor material of a second conductivity type within the substrate”⁶

Fairchild returns to and re-hashes its “DMOS” argument with its proposed construction of the “substrate” term. For this term, Fairchild circularly argues that claim 1 of the '075 patent cannot be construed to cover a device with a pocket formed in a “p-body region” because Fairchild’s attorneys assert (without support) that the p-channel diffusion of Colak is a “p-body.” [Fairchild Brief at 9-10]. This is another estoppel argument masquerading as claim construction, and the Court should decline to address it. Fairchild’s argument is also wrong because, as explained above, Power Integrations’ disclaimer of the DMOS of Colak during prosecution has nothing to do with a pocket formed in a “p-body region.” Indeed, Fairchild’s attempt to stretch its DMOS exclusion argument reaches its zenith with this term, as the specific passage in Fairchild’s brief that sets forth this contention has no citation—to expert testimony, treatises, or anything else—to show what the lawyers say is the usage or understanding of the terms by those of skill in the art. [See *id.* at 9 (“[I]n a DMOS device the source region is diffused into a region of different material, often referred to as a p-body region, that has been previously diffused into the substrate (hence the term “double-diffused”). The channel region is then formed in the p-body region, between the edge of the source diffusion region and the edge of the p-body region, rather than in the substrate.”)].

In addition to being unsupported, Fairchild’s position regarding “p-body” is fundamentally wrong. P-body is a term that *Fairchild* used in the 2000s to describe its devices, specifically, to describe *additional* diffusions of dopant that adjust the characteristics of the channel region but which are independent of the diffusion that forms the p-channel region. [See Hayes Decl. Ex. A (Shields Opening Report) at ¶¶ 16,

⁶ As Fairchild makes the same general arguments in the sections of its brief regarding this term and the section addressing “substrate,” Power Integrations responds to the two sections as though they were one.

23, and Ex. I]. In the context of the '075 patent, the more modern terminology “p-body”—although not used—would be understood by one of skill in the art to refer not to the channel region itself, but to *additional* diffusions in the channel region to adjust its characteristics. [See *id.* at Ex. I]. Such additional diffusions are present in the preferred embodiment of the '075 patent, labeled as 22 and 23 in Figure 1. [*Id.* at ¶¶ 16, 23]. Without the additional “p-body” dopant, a device practicing the '075 patent would still be a functional transistor. [*Id.* at Ex. I]. Colak, by way of contrast, does not teach anything like this additional dopant “p-body,” nor does the term p-body appear in Colak or in any of the materials contemporaneous with the prosecution of the '075 patent.

Finally, Fairchild’s suggested construction is again inconsistent with the preferred embodiment disclosed in the '075 patent, because it would exclude the preferred embodiment that shows the drain contact region formed in a well and not directly in the base silicon wafer. [*Id.* at ¶ 23]. Therefore, the Court should reject Fairchild’s efforts to confuse the issue regarding the “substrate” term with irrelevant and baseless attorney argument.⁷

2. **“a surface adjoining layer of material of the first conductivity type on top of an intermediate portion of the extended drain region between the drain contact pocket and the surface-adjoining positions”**

As noted in its opening brief, Power Integrations does not believe this term requires construction, as further explanation will only confuse the issues. Even if the Court determines that it needs construction, the parties are largely in agreement regarding the meaning that attaches to this term (with the exception of the DMOS disagreement

⁷ In addressing this term, Fairchild also raises arguments that Power Integrations included new matter regarding the term during prosecution and that this “new matter” requires a limitation on the scope of the term and a later filing date. [Fairchild Brief at 9 & 10, fn. 3]. That footnote is the first time Power Integrations has heard this argument—it is not in Fairchild’s expert’s opening report or its earlier claim construction proposals—so the Court should disregard it. The argument is also irrelevant because the amendment occurred before or at the same time as the statements Fairchild relies on to allege estoppel and so already formed part of the disclosure being discussed. Fairchild’s argument regarding priority is simply incorrect because the substrate of the claims was adequately supported in the original application and the amendment simply added further clarification of the subject matter that was already there.

discussed at length above and the slight wording difference discussed in Power Integrations' opening brief). Power Integrations refers the Court to its previous discussions.

3. "said top layer of material"

Fairchild argues that the term "said top layer of material" lacks antecedent basis, but that position is untenable in light of the recitation in the immediately preceding term of "a surface adjoining layer of material of the first conductivity type on top of an intermediate portion of the extended drain region" As noted in Power Integrations' opening brief, there is no confusion as to the term "said top layer of material"—it is unambiguously clear in its reference to the preceding term—and there is thus no antecedent basis problem. [See Power Integrations' Opening Brief at 33-34; D.I. 152 (Shields Decl.) at ¶ 4].

Moreover, Fairchild provides no legal support for its antecedent basis argument. In fact, the only citation Fairchild provides, to a section from the MPEP, notes that antecedent basis problems arise only where there is no earlier recitation of a term "*and where it would be unclear as to what element the limitation was making reference.*" [Fairchild Brief at 13 (emphasis in original)]. In light of the fact that there is no such lack of clarity in the instant case, Fairchild's argument relating to this term is incorrect and must be rejected.

4. "being subject to application of a reverse-bias voltage"

Fairchild's argument for the reverse-bias term leans heavily on another implausible reading of the plain language of the patent. For this term, Fairchild accuses Power Integrations of attempting to import a "grounding" limitation from the specification [Fairchild Brief at 14], but Fairchild's argument ignores the fact that a connection to ground is what allows for the application of the reverse-bias voltage as claimed. [D.I. 154 (Shields Decl.) at ¶ 5]. Undaunted, Fairchild would have the Court read out the "reverse-bias" portion of the claims and ignore the discussion of how to

implement it in the specification, which explains that reverse-biasing is accomplished by way of grounding. [Hayes Decl. Ex. D (Shields Rebuttal Report) at ¶¶ 38-43]. It is not credible to argue that one of ordinary skill in the art would read the patent to teach something other than what is explicitly claimed and described—reverse biasing, i.e. grounding by connecting the top layer to the substrate—yet Fairchild and its expert Dr. Gwozdz make the argument anyway, in an effort to invalidate the claims. The Court should reject Fairchild’s attorney argument and expert evidence that so plainly contradicts the intrinsic evidence. *Phillips*, 415 F.3d at 1324 (noting a Court may rely on extrinsic evidence “as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence”).

C. The Power Integrations ’366 and ’851 Circuit Patents

Fairchild’s arguments on the circuit patents unfortunately rely on misrepresentations of the intrinsic evidence. For example, Fairchild repeatedly states that the patents admit the claimed “frequency variation circuit” and “soft start circuit” were in the prior art, but this statement is false and contradicts what the patents actually say. In fact, the claimed circuits are explicitly distinguished from prior art functionalities that addressed similar problems in a far less elegant and ultimately unsuccessful manner, compared to what is disclosed in the patents.

At one point in the brief, though, Fairchild admits that Power Integrations did not claim the prior art but rather “a new way of implementing the old soft start and frequency variation *concepts* in a PWM device.” [Fairchild Brief at 18 (emphasis added)]. This passage presents the only correct description of Power Integrations’ patented technology in Fairchild’s brief.

1. Soft start circuit

- a. The Court should not construe the term “soft start circuit” to read on prior art explicitly distinguished in the patent.

Throughout its brief, Fairchild shifts between discussing a “soft start circuit” and the more general notion of “soft start” functionality, but the distinction is important. Power Integrations invented and claimed the specific “soft start **circuit**” of the patents; the function was around before, and Power Integrations has never claimed otherwise. Indeed, in the “background” portion of the specification Fairchild cites (’851 patent at col. 2:56-3:8), the patents disclose that previous devices (including those explicitly labeled as prior art in the patent) provided a different sort of soft start *functionality* than the claimed “soft start circuit.” [See, e.g., Headley Decl. Ex. A (’851 patent) at col. 2:27-28 (“Referring to FIG. 1 a known power supply that attempts to minimize EMI and reduce startup stress is depicted”) (emphasis added)]. However, at no point does Power Integrations refer to the prior art with the same terms as the invention or equate it with the claimed “soft start circuit.” So when, at page 15, Fairchild suggests that Power Integrations admits it did not invent the “soft start circuit” of the patents, that is far from the truth.

Fairchild’s entire argument for the construction of the term “soft start circuit”—that the term should be construed so broadly as to invalidate the claim based on what the ’851 patent labels and discusses as “PRIOR ART”—makes no sense. Fairchild purports to quote the specification of the Power Integrations ’851 patent for a discussion of “prior art PWM devices that utilize soft start circuits” [Fairchild Brief at 16 (citing ’851 patent at col. 2:56-3:8)], but the cited portion of the specification does not mention the claimed “soft start circuit.” Instead, it discusses the use of *external soft start capacitor 110* that is explicitly labeled “PRIOR ART” in Figure 1 of the patent. The discussion in the specification Fairchild cites regarding the use of an external capacitor to provide soft start *functionality* [see Fairchild Brief at 20 (citing ’366 patent at col. 3:11-17)], similarly

refers to prior art Fig. 1 of the patent, and Fairchild ignores the import of the very passage it cites. The specification, in fact, explains the limitations of this prior art methodology and distinguishes it from the claimed invention: “[T]he transformer may saturate, and therefore the transformer may have to be designed utilizing a higher core size than would be required for normal operation” [Headley Decl. Ex. B (’366 patent) at col. 3:13-16]. The intrinsic evidence detailed in Power Integrations’ opening brief shows that the claimed “circuit” and the prior art “functionality” are different things.

b. The Court should construe the term “soft start circuit” as subject to section 112 ¶ 6 despite Fairchild’s last-minute change of heart.

Fairchild further argues that Power Integrations is wrong as a matter of law in suggesting that the claimed “soft start circuit” is subject to section 112 ¶ 6, but this assertion ignores the fact that Fairchild agreed with Power Integrations (and adopted the same position) for most of case.⁸ [See Headley Decl. Ex. H at 9-12, Ex. I at 4-6]. Fairchild only abandoned this position when it realized the absurdity of arguing that such a means-plus-function claim should include as part of its corresponding structure what was explicitly labeled “PRIOR ART” in the patent. [See Headley Decl. Ex. J]. Ever constant with respect to one thing—the result-oriented approach—Fairchild still attempts to invalidate the claims by having them read on the same explicitly acknowledged prior art, this time by arguing section 112(6) *should not* apply.

Nevertheless, Fairchild’s argument that the use of an external soft start capacitor (as taught in the figure labeled “PRIOR ART”) is the same as the “soft start circuit” of the claims again requires the Court to believe the patent examiner was incompetent, something the law does not permit. See *Applied Materials, Inc. v. Advanced Semiconductor Materials America, Inc.*, 98 F.3d 1563, 1569 (Fed. Cir. 1996) (“The

⁸ At page 19 of its brief, Fairchild also argues for the first time that Power Integrations broadened its claims during prosecution. As this is the first time Fairchild has made the argument, and the argument is not in Fairchild’s expert’s invalidity report, the Court should disregard it. The argument is also, again, irrelevant to claim construction.

presumption of validity is based on the presumption of administrative correctness of actions of the agency charged with examination of patentability.”).

Fairchild also discusses a prior case involving Power Integrations’ expert on the circuit patent technology—Robert Blauschild—in an attempt to impugn Mr. Blauschild’s credibility regarding the construction of “soft start circuit.” [Fairchild Brief at 21-23 (citing *Linear Tech. Corp. v. Impala Linear Corp.*, 279 F.3d 1311 (Fed. Cir. 2004))]. The Court should see Fairchild’s efforts for what they are—more misdirection. The determination of whether a claim term is subject to section 112 ¶ 6 turns on *the specific terms* of the patents in question. *See Linear Tech.*, 279 F.3d at 1318-20; *see also Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998) (noting “traditional ‘means’ language does not automatically make an element a means-plus-function element, conversely, lack of such language does not prevent a limitation from being construed as a means-plus-function limitation.”). The fact that Mr. Blauschild reached a different conclusion regarding a term that contained the word “circuit” *in a different case* is of no import here.⁹ Because Fairchild cannot provide any link between the facts of the two cases (beyond the mere use of the word “circuit”) to show any inconsistency at all in Mr. Blauschild’s testimony, the court should ignore Fairchild’s arguments regarding Mr. Blauschild’s former work. Fairchild has been forced to attack Mr. Blauschild in this way because it cannot offer, and has not offered, any expert testimony to rebut Mr. Blauschild’s conclusion that, in view of the knowledge and understanding of one of skill in the art at the time of the patent, the term “soft start circuit” should be subject to the application of section 112 ¶ 6.

Fairchild’s discussion of the proper corresponding structure in the event the Court construes “soft start circuit” as being subject to section 112 ¶ 6 also overreaches. In

⁹ The Court may wish to note, however, that the Federal Circuit in the *Linear Technology* case recognized Mr. Blauschild’s technical expertise in the relevant field, reversing a District Court judge and explicitly adopting the construction Mr. Blauschild set forth in that case. *See Linear Tech.*, 279 F.3d at 1320-21.

discussing the appropriate corresponding structure, Fairchild admits that the external soft start capacitor 110 and its use in Figure 1 is explicitly stated in the patent to be “a known power supply utilizing . . . external soft start” [Fairchild Brief at 25 (quoting ’366 patent at col. 4:46-47)], yet Fairchild says it is corresponding structure nonetheless. This prior art is clearly not the invention—which is an internal “soft start circuit”—so the Court should reject Fairchild’s transparent efforts to invalidate the claims.

The *Clearstream* case Fairchild cites for the proposition that a prior art structure can be an embodiment of a means-plus-function claim [Fairchild Brief at 26] is fundamentally different from this case. First, *Clearstream* involved a claim differentiation issue, as a dependent claim called out the non-prior art system and thus suggested that the claim from which it depended did not differentiate between the two. *Clearstream Wastewater Sys. V. Hydro-Action, Inc.*, 206 F.3d 1440, 1446-47 (Fed. Cir. 2000). Moreover, as noted above, the Power Integrations patents disclose the need to use an internal signal (not just the benefits of using such a signal) to achieve the aims of the claimed invention. Simply put, the nature of Power Integrations’ invention is such that it overcomes the problems with the external soft start prior art. Even the patents’ titles reflect that the invention covers “integrated soft start.” In *Clearstream*, by contrast, the Federal Circuit found the means-plus-function claims at issue encompassed the prior art because the specification “explain[ed] that the [prior art] system is the typical manner in which [the specific step of the claimed invention] is accomplished.” *Clearstream*, 206 F.3d at 1446. Therefore, the Court should again reject Fairchild’s overreaching efforts to construe the terms so as to invalidate them.

2. The Power Integrations ’366 and ’851 Patents Are Not Limited to the Use of Specifically a Low Frequency Oscillator.

Fairchild also argues for the first time in its Opening Brief that the inventions of the ’366 and ’851 patents are limited to the use of a low frequency oscillator to implement both the soft start and frequency variation circuits. [Fairchild’s Brief at 17-19,

23-24]. This position is wrong for several reasons. First, there is nothing in the patents that limits the claimed “soft start circuit” to use of the “frequency variation signal.” In fact, different claims provide slightly different variations on the implementations of the claimed soft start circuit, and only the claims that explicitly call out the use of a frequency variation signal should be construed to require such a signal at all. [*Compare* Headley Decl. Ex. A ('851 patent) claims 4, 13 with Ex. B ('366 patent) claims 9, 16]. Second, even where the claimed “soft start circuit” does require a frequency variation signal, the patents expressly teach that that signal need not be generated by an oscillator. For example, the patents expressly include, among the optional sources of a frequency variation signal, “ramp signals,” “*counter output signals*,” or “other signals that vary in magnitude during a fixed period of time.” [Headley Decl. Ex. A ('851 patent) at col. 6:25-38 (emphasis added)]. Fairchild is therefore incorrect in asserting that these inventions are somehow limited only to the use of a low frequency oscillator to generate the frequency variation signal.

Fairchild also improperly seeks to limit the “soft start circuit” and “frequency variation signal” to the preferred embodiment of the frequency variation signal on the basis of statements from an internal Power Integrations disclosure form the inventors filled out to describe the initial conception of the invention – not what was provided to the Patent Office and eventually issued as the patents-in-suit. [Fairchild Brief at 17-18]. Any discussion of the invention disclosure form is beside the point, as this extrinsic evidence has no bearing on the interpretation of the ultimately issued claims. It is the patent that matters, and, as noted above, it would be improper for the Court to limit the invention to the preferred embodiment in light of the alternate disclosures in the patents’ specifications.

3. “Frequency Variation Circuit”/“Frequency Variation Signal”

As with the terms “DMOS” and “soft start circuit,” Fairchild tries to blur the distinction between the prior art and claimed invention by employing slight variations in

its descriptions of the two technologies. Here again, Fairchild would have the Court believe that the patents disclose the very art that invalidates them. To be clear, Power Integrations' patents claim a "frequency variation circuit that provides a frequency variation signal." Although the acknowledged prior art describes varying or changing the frequency of various signals, it does not teach the claimed "frequency variation circuit" or "frequency variation signal" of the patents, and the patents of course never say otherwise. [See Hayes Decl. Ex. F (Blauschild Rebuttal Report) at ¶ 47 ("The patent does not call current 135 a frequency variation signal. In fact, the patent distinguishes this signal from the invention because it is NOT internal or predetermined.")].

Fairchild also argues that Power Integrations improperly seeks to import limitations from the specification with respect to the "frequency variation circuit" limitation [Fairchild Brief at 28-29], but for most of the case Fairchild claimed that the term was subject to section 112 ¶ 6 and thus dependent on the very language it now hopes to avoid. Again, as with Fairchild's flip-flopping on the term soft start circuit, this change of position reflects the lack of conviction Fairchild has in its own positions.

As noted above, Fairchild's brief also puts forth a new argument in an effort to limit the scope of the claimed frequency variation signal (which is also an input to the claimed "soft start circuit" in places) to the preferred embodiment, which calls out the use of a triangular waveform generated by a low frequency oscillator. As also noted above, Fairchild's argument ignores key disclosures in the patents' specifications regarding alternative frequency variation signals when it tries to limit the inventions to the use of a low frequency oscillator, and such efforts to limit the invention to the preferred embodiment are misguided.

Fairchild also argues that the term "monolithic" in certain dependant claims somehow suggests that the claimed frequency variation signal can be external, under the doctrine of claim differentiation, but again Fairchild's argument is wrong. The key here is **what** the claim recites as internal or "monolithic" – including the switch and the

frequency variation circuit. The independent claim could encompass implementations where the switch was outside the integrated circuit. Accordingly, claim differentiation does not suggest or compel the conclusion that claim 1 encompasses implementations where the frequency variation circuit is also outside the monolithic integrated circuit.

Moreover, the passage Fairchild quotes from the specification in arguing that the claims cover an external frequency variation signal explicitly discusses the shortcomings of the prior art methods of Figure 1, which teaches the old way of changing the frequency with an external signal. [See Fairchild's Brief at 29 (quoting '366 patent at col. 6:18-26 (describing the claimed invention's use of an *internal* frequency variation signal and noting it "has an advantage over the frequency jitter operation of FIG. 1 in that the frequency range of the presently preferred pulse width modulation switch 262 is known and fixed, and is not subject to the line voltage or load magnitude variations.")]. The express teaching of the patent is to provide an *integrated* frequency variation circuit, so a construction that would allow for an external circuit would be inconsistent with the intrinsic evidence.

Fairchild also tries to rely on the prosecution history to argue for its broad construction of this term [Fairchild Brief at 30], but Fairchild ignores that the examiner allowed claim 1 of the '851 patent without objection. In fact, the examiner explicitly noted "[t]he prior Art of record does not appear to disclose or suggest a PWM switch comprising an oscillator for generating a maximum duty cycle signal and a signal with a frequency range dependent on a frequency variation circuit as recited in claim 1." [Hayes Decl. Ex. G (12/13/1999 office action) at 5]. The passage Fairchild cites from that same office action discusses a different claim (what later became claim 11), and, rather than helping Fairchild, the discussion and subsequent amendments to what became claim 11 (which brought it in line with the previously allowed claim 1) instead weigh in favor of the narrower construction Power Integrations has set forth (that the frequency variation signal varies cyclically during a fixed period of time).

D. The Power Integrations '876 Circuit Patent

The parties' briefs suggest a number of disagreements with respect to the '876 patent, but the disputes can be fairly well grouped into three areas: "frequency jittering," "coupled," and the various voltage-related terms of claims 17 and 19.

1. "Frequency jittering"

Power Integrations discussed this term extensively in its opening brief, and does not wish to belabor the point here, but there is one major point worth noting in response to Fairchild's brief: Fairchild argues that the claimed frequency jittering need not be controlled and predetermined. That argument defies the express teaching of the patent and the whole purpose of the invention. If the jittering is not controlled and predetermined, it would not provide the EMI reduction benefits of the invention explicitly enumerated in the specification. [*See generally* Hayes Decl. Ex. E (Blauschild Opening Report) at 15-17]. Fairchild knows this, but it nevertheless argues for a broad construction of jittering that reads on the art discussed as prior art in the patent, and even art far afield from the patent, that nevertheless changed the frequency in some random manner.

2. "Coupled"

Fairchild's proposed construction for the term "coupled" ignores the context of the claims and does nothing to aid the finder of fact in addressing the parties' dispute. Fairchild's assertion notwithstanding, Power Integrations has not argued that the term "coupled" requires a direct connection.¹⁰ [*See* Fairchild's Opening Brief at 34]. Instead, Power Integrations' proposed construction for the term "coupled" as used in the '876 patent closely tracks the passage in the patent that describes the purpose for which various parts of the claimed invention are coupled. [*See* Headley Decl. Ex. C ('876 patent) claim 1 (reciting both "a digital to analog converter coupled to the control input

¹⁰ The case Fairchild quotes to undercut the "direct connection" construction it inaccurately attributes to Power Integrations is also, therefore, inapposite.

for varying the switching frequency” and “a counter coupled to the ... digital to analog converter, the counter causing the digital to analog converter to adjust...”); *id.* at col. 2:7-9 (“The counter causes the digital to analog converter to adjust the control input and to vary the switching frequency.”)]. At its core, the coupling of the ’876 patent is about *control*, and this is what Power Integrations seeks to convey with its construction. Fairchild’s construction, by way of contrast, merely refers to undefined signals “passing” between circuits. The Court should reject Fairchild’s vague construction of the term “coupled” and adopt a construction that, as used in the ’876 patent, “two circuits are coupled when they are connected such that voltage, current or control signals pass from one to the other.”

3. voltage-related terms

Fairchild argues that the various voltage-related terms in claims 17 and 19 of the ’876 patent (“primary voltage,” “secondary voltage,” “secondary voltage sources,” “supplemental voltage”) are all completely distinct signals, but, as noted in Power Integrations’ opening brief, the relationships between these signals determine how these terms should be construed. Fairchild admits that “[t]he voltages and voltage source elements of claims 17-19 must be considered together when construed” [Fairchild Brief at 34], but Fairchild nevertheless suggests constructions that ignore the relationships between the signals. As recited in the claims, and as can easily be understood from the context of the specification, the primary voltage is simply an initial or base voltage, to which either a secondary voltage (claim 17) or supplemental voltages (claim 19) are added, to result in an output which controls the oscillator. This relationship between the primary, secondary, and supplemental voltages is clear.

Moreover, although the primary voltage **can** come from a source that is distinct from the secondary voltage sources, the Court should not add another limitation that

requires the primary voltage to be generated from a distinct source, as Fairchild urges.¹¹ [Fairchild Brief at 36-37.] Fairchild's own brief emphasizes the impropriety of adding limitations that are not present in the claims. [*Id.* at 28 (“*[I]t is particularly important not to import into a claim limitations that are not part of the claim.*”) (emphasis in Fairchild Brief)]. Fairchild's argument that Power Integrations asserts the primary voltage comes from thin air is simply wrong. Power Integrations' point is that the claim does not specify a source of primary voltage, so there is no reason to limit the primary voltage to some specific source as Fairchild suggests. Even if the Court were to designate a source for the primary voltage, as noted above it would be improper to add a new limitation to the claim that required a primary voltage source **distinct from** the secondary voltage source.

III. CONCLUSION

For the reasons set forth above, and as explained in Power Integrations' other briefs and declarations, the Court should adopt Power Integrations' proposed constructions for the terms of the patents-in-suit.

¹¹ In this same section, Fairchild asserts there is no support for Power Integrations' suggestion that the secondary voltage source can be a resistor, Fairchild Brief at 37, but the Blauschild Declaration submitted with Power Integrations' opening brief explicitly notes that a resistor can be the source of the secondary voltage. *See* D.I.155 at ¶ 5.

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CERTIFICATE OF SERVICE

I hereby certify that on January 25, 2006, I electronically filed with the Clerk of Court Public Version of Power Integrations' Responsive Claim Construction Brief using CM/ECF which will send electronic notification of such filing(s) to the following Delaware counsel.

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